

CLAIMS

1. Nonwoven fabric that includes a surface for fastening the male component of a hook and loop fastener system which comprises a carded and needled fabric of functional fibres and binding fibres, where the functional fibres are comprised of thermoplastic polymer fibres, and where the nonwoven fabric is bonded by partially melting the binding fibres.
2. A nonwoven fabric according to Claim 1, **characterised** in that the functional fibres are comprised of one or more types of polyester fibres and/or polypropylene fibres.
3. A nonwoven fabric according to Claim 2, **characterised** in that the fabric includes two types of functional polyester fibres of mutually different thickness.
4. A nonwoven fabric according to any one of Claims 1-3, **characterised** in that the functional fibres include spiralled bi-component fibres or multi-component fibres of the side-by-side type.
5. A nonwoven fabric according to Claim 4, **characterised** in that the functional fibres include both crimped polyester fibres and spiralled fibres.
6. A nonwoven fabric according to any one of Claims 1-5, **characterised** in that the fabric contains 10-25% by weight binding fibres and 75-90% by weight functional fibres.
7. A nonwoven fabric according to any one of Claims 1-6, **characterised** in that 40-60% by weight of the functional fibres are spiralled fibres.
8. A nonwoven fabric according to any one of Claims 1-7, **characterised** in that the binding fibres comprise bi-component fibres that include a core and an outer

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casing, where the outer casing component has a lower melting point than the inner core component.

9. A method of producing a nonwoven fabric that has a fastener surface
5 according to Claim 1, **characterised** by carding a mixture of binding fibres and functional fibres to form a fibrous web; needling the fibrous web to obtain a dense material that has a structure suitable for the male component of a hook and loop fastener to fasten thereto; and heating the needled fibrous web so as to partially melt the binding fibres.

10. A method according to Claim 9, **characterised** by smooth calendering the needled and heated fibrous web so that one surface thereof will be smooth.

11. A method according to Claim 9 or 10, **characterised** in that the binding
15 fibres are comprised of bi-component fibres that include a core and a casing, where said casing has a lower melting point than the core; and heating the needled fibrous web so that the casings of respective binding fibres will melt while the core remains solid.

12. An absorbent article (14), such as a diaper or incontinence guard, which includes a substantially liquid-impermeable backing sheet and a hook and loop fastener system that includes a female component and a male component attached to said backing sheet for mutual coaction such as to secure the article in position on a wearer, **characterised** in that the female component (1) of the system is comprised of
25 nonwoven fabric according to any one of Claims 1-8.

13. An article according to Claim 12, **characterised** in that the article includes an absorbent body enclosed between a liquid-permeable inner sheet that lies proximal to the wearer in use and said substantially liquid-impermeable backing sheet that lies distal from the wearer in use, said backing sheet being delimited by two short sides (10, 11) and two long sides (12, 13), wherein two male-component tabs (2)

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belonging to said fastener system are fastened to said backing sheet on each long side (12, 13) thereof close to one short side (10), so as to form an extension of the short side with the male component facing in the same direction as the inner sheet; and in that the female component (1) is provided on the backing sheet at the other short side (11).

14. An article according to Claim 13, **characterised** in that one female component piece (1) is provided in each corner of said second short side (11).

15. An article according to Claim 13, **characterised** in that the female component (1) is comprised of a strip that extends essentially along the full length of the second short side (11).

16. An article according to Claim 12, **characterised** in that said article includes two parts, a belt (15) which is intended to be fastened around the waist of a wearer, and an absorbent part (14) which, in use, is fastened to the belt by means of mutually coacting male and female components (1, 2) of the hook and loop fastener system and which includes an absorbent body enclosed between a liquid-permeable inner sheet intended to lie proximal to the wearer in use and said substantially liquid-impermeable backing sheet intended to lie distal from the wearer in use and delimited by two short sides (10, 11) and two long sides (12, 13), wherein the mutually coacting components (1, 2) are disposed along the short sides (10, 11) of said absorbent body and on said belt (15) respectively.

17. An article according to Claim 16, **characterised** in that the female component (1) is disposed on the inner surface of the belt (15) and the male component (2) is disposed on the outer surface of the absorbent body (14).

18. An article according to Claim 16, **characterised** in that the male component (2) is disposed on the inner surface of the belt (15) and the female component (1) is disposed on the outer surface of the absorbent body (14).

19. An article according to Claim 16, **characterised** in that the male component (2) is disposed on the outer surface of the belt (15) and the female component (1) is disposed on the inner surface of the absorbent body (14).

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20. An article according to Claim 16, **characterised** in that the female component (1) is disposed on the outer surface of the belt (15) and the male component (2) is disposed on the inner surface of the absorbent body (14).

- 10 21. The use of a nonwoven fabric that includes a fastener surface according to any of claims 1-8, which comprises a carded and needled fibrous web of functional fibres and binding fibres, where the functional fibres are comprised of thermoplastic polymer fibres, and where the nonwoven fabric is bonded by partially melting the binding fibres, as the female component in a hook and loop fastener system in an
- 15 absorbent article (14), such as a diaper or incontinence guard, which includes a substantially liquid-impermeable backing sheet and a hook and loop fastener system that includes a female component and a male component attached to said backing sheet for mutual coaction such as to secure the article in position on a wearer.

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